

IN THE SUMMARY OF THE INVENTION-MARKED UP VERSION

1 The invention is a novel design of such a reusable hub for securing and removing a
2 disposable core made to fit to a standard valve, Luer or Luer lock type and attached to a hose
3 leading from a pump that is connected to a reservoir of liquid. A nozzle hub comprises:
4 A cylindrically-shaped wall extending downward to an exterior groove, then outward to a break
5 point defined by a hexagonal shape spaced apart from said exterior groove, downward there-
6 from along the faces to an adjacent fund-us which has a hexagonal perimeter; an interior
7 cylindrically-shaped barrel wall made with a slight inward slant or cast and extends downward
8 from the upper surface to said fund-us; a groove with a ledge defined by a vertical perimeter and
9 a flare extending inward from said perimeter; the top side of the groove is used to pull the seated
10 nozzle core from the Luer or Luer lock type taper; a longitudinal slot descending along the hub
11 set inward at an acute angle; a horizontal furrow intersecting said groove and spaced tangent to
12 said ledge defined by a vertical perimeter and a flare extending inward from the perimeter.
13 Wherein there is a controlled ratio of the (external) diameter of said interior cylindrically shaped
14 barrel wall made with a slight inward slant or cast measured at any elevation between the
15 tangency point at the intersection of the flare extending inward from the perimeter and the fund-
16 us and the width of said longitudinal slot descending along said hub set inward at an acute angle
17 measured at an identical elevation of greater than 0.5. The nozzle hub for securing a nozzle core,
18 wherein a longitudinal slot extending downward along said hub, a nozzle core is compressed
19 through the slot, sliding along a horizontal furrow intersecting a groove and spaced tangent to a
20 ledge defined by a vertical perimeter, expanding to locate the nozzle core on the flare extending
21 inward from said perimeter. Currently, two designs exist for the hub. The concept behind each
22 design is different, according to the sensitivity of the dispensing process to the thermal response
23 rate. Initially, hubs were brazed to the core enabling fast heat transfer from the hub to the core.
24 This design trades increased cost for superior advantage in thermal response rate.
25 Accordingly, the main object of this invention is a novel nozzle hub that can be removed from
26 the nozzle core and reused, reducing cost to the consumer by allowing replacement of the
27 contiguous core held by the hub. The hub is retained to use for holding the next core. The hub
28 can be made from any material but those made for use in a heated application contain a high
29 percentage of copper. The nozzle hub permits disposal of nozzle core alone, reducing waste and
30 allows the nozzles to be made more economically and more useful in the relevant industry.

Application No. 10/713,681

Filing Date: November 14, 2003

Applicant: Brian L. Verrilli

For: SIMPLISTIC APPROACH TO DESIGN OF A REUSABLE NOZZLE HUB

IN THE SUMMARY OF THE INVENTION-MARKED UP VERSION

1 These and other objects of the invention will become clearer when one reads the
2 following specification, taken together with the drawings that are attached hereto. The scope of
3 protection sought by the inventor may be gleaned from a fair reading of the Claims that conclude
4 this specification.
5